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(74) Agent: GRAVENDEEL, Cornelis; Internationaal Octrooibureau B.V., Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL).

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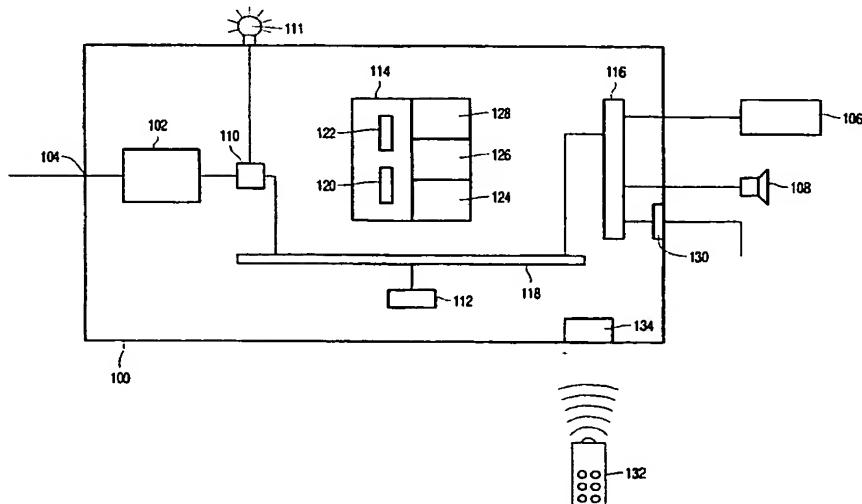
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(71) Applicant: KONINKLIJKE PHILIPS ELECTRONICS N.V. [NL/NL]; Groenewoudseweg 1, NL-5621 BA Eindhoven (NL).

(72) Inventor: DE SOUZA, Allan, M.; Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL).

(54) Title: METHOD AND DEVICE FOR HOME SHOPPING

**WO 01/19085 A1**

(57) Abstract: A broadcasting company broadcasts a program to be received and reproduced at a local terminal (100). At suitable instants, additional purchasing information is embedded in the transmitted program data. The local terminal detects this additional information by means of detector (110) and provides the viewer accordingly with an indication (111). The viewer may then decide to view the purchasing information and to order the corresponding product. According to the invention, the purchase order is not directly sent to the selling organization but stored in a local list (122) in the terminal, possibly with other purchase orders. Then at a later instant, the stored purchase orders are reviewed to decide for each order whether it should be pursued or should be discarded. If a purchase order is to be pursued, it is sent via a modem (130) to the organization processing the purchase.

Method and device for home shopping.

The invention relates to a method of enabling a user to place a purchase order from a local terminal, the method comprising the step of transmitting audio and/or video program data to be presented at the local terminal, the audio and/or video program data comprising purchasing information related to a product and the step of offering the user the option to indicate an intention to buy the product.

The invention further relates to a local terminal for the reproduction of received audio and/or video program data and for enabling a user to place a purchase order, the local terminal comprising a receiver for the reception of the audio and/or video program data occasionally including purchasing information related to a product; detection means for

detecting the presence of the purchasing information in the audio and/or video program data; presenting means for presenting the user the option to indicate an intention to buy the product; and sending means for sending the purchase order for processing.

German patent application DE 44 27 046 A1 describes a method of buying products using a television set. In this method, the teletext lines of the program signal contain at relevant times information which is additional to the program content. The additional information includes purchase information for a product and a telephone number of an organization handling the purchase. When the television set detects the presence of the additional information in the program, this additional information is temporarily stored in a memory in the television set and an indication signal is given to the user. If the user then presses a button, part of the additional information is displayed on the television screen, e.g. the description and price of the product. If the user wants to buy this product he then again presses a button and a connection is made via a modem in the television set, using the stored telephone number. Subsequently, a purchase order is sent via the modem including the identification of the desired product and the identification of the buyer.

The execution of the actions involved in processing the purchase of a given product requires an amount of time. The product details must be displayed on the screen and the user may need to fill out some details concerning the purchase. Care should be taken that the purchase of one product does not interfere with the presentation and sending of additional information for the next product. At the side of the sender, sufficient time must be allowed

between different products and at the side of the television set, measures must be taken to prohibit the interference, e.g. skipping the purchase information of one of the products if a next one comes available in the program signal.

It is an object of the invention to provide a method as described in the preamble with an improved management of the purchase order. This object is achieved according to the invention in a method that further includes the steps of, if the user indicates the intention to buy, locally storing in a list the purchase order for the product; upon request by the user, presenting the list with the purchase order for review and offering the option to finalize the purchase order; and if the user finalizes the purchase order, sending away the purchase order for processing. Locally storing the purchase order requires less time than finalizing the purchase order and sending it away. Consequently, the user is involved with the purchase for a shorter time and his attention is drawn from the currently presented program for a shorter time. This reduces the risk that the user may miss a next, maybe more attractive, advertisement and purchase offer. A further advantage is that the advertisers offering their products through the program content and the additional purchasing information, gain more attention from the users since the purchase handling during the program presentation requires less time.

The review of stored purchase orders prior to actually sending them away gives the user the possibility for a more considerate and balanced decision regarding the purchases. The user may place various purchase orders during the day while watching the programs since he is reassured that he can take back a purchase order if a more attractive product was offered after he had already ordered some product. For instance, when the user is watching a music program and has ordered a certain CD he may find a later announced CD more attractive. He can then order that later CD, since he can withdraw the earlier order when reviewing the list of stored purchase orders.

An embodiment of the method according to the invention is described in claim 2. Since a Uniform Resource Locator (URL) provides an address of a location to be reached via the Internet, it gives a very flexible mechanism to make a connection to a remote machine for handling the purchase order.

An embodiment of the method according to the invention is described in claim 3. In this way, the product information on basis of which the user decides to buy the product need not be completely present in the program data but can be obtained from a remote computer. The product information can then contain more data, like pictures or other forms of voluminous data, than would be possible if all data were to be coded in the program data.

Furthermore, the additional information obtained from the remote computer may contain up-to-date product information like availability and price. This is especially valuable in case the transmitted program data has been recorded some time prior to the presentation to the user.

It is a further object of the invention to provide a local terminal as described in the preamble with an improved management of the purchase order. This object is achieved according to the invention in a local terminal which is characterized in that it includes storing means for locally storing in a list the purchase order for the product and reviewing means for presenting the user the stored list for review and for presenting the user the option to finalize the purchase order.

An embodiment of the local terminal according to the invention is described in claim 5. The user is then explicitly informed that there is at that moment an opportunity to order a product. The detection means of this embodiment avoids the need to include an indication that a product can be ordered in the audio and/or video program data itself. The presence of the purchasing information can be signaled in one of various ways, for example a logo may be overlaid on the video on the television screen, an indicator lamp on the local terminal may light up or a characteristic sound may be reproduced.

An embodiment of the local terminal according to the invention is described in claim 6. A modem is an easy and flexible way to send data to a remote location for handling the purchase order. The connection can be made via a public telephone line.

The invention and its attendant advantages will be further elucidated with the aid of exemplary embodiments and the accompanying schematic drawing, wherein:

Figure 1 schematically shows the most important components of a local terminal according to the invention.

Figure 1 schematically shows the most important components of a local terminal according to the invention. In the shown embodiment, a number of the means of the local terminal 100 are implemented as software modules in computer architecture. It should be noted that another distribution of the required function over the modules is possible and that some of the means can be implemented in hardware. The local terminal 100 has a receiver 102 to receive audio and/or video program data via an input 104. The audio and/or video program may be transmitted to the local terminal via a cable, via broadcast, via playback from a local storage medium, or via some other way. The program data concerns a certain program, like a show or a documentary or the like, to be presented to the user at the local terminal. In the

preferred embodiment, the local terminal is a television set equipped with the additional means required for the invention and further described below. The program is presented to the user via display 106 and speakers 108. At appropriate instants, the program data contains purchasing information which may be related to the program content but which is not 5 presented as part of the program content. The purchasing information is coded in the lines corresponding with the Video Blanking Interval of the television image according to the well-known teletext standard. The teletext decoder of the television set decodes these lines and retrieves the information in it. The local terminal has a detector 110 which operates with the teletext decoder and which detects the presence of the additional purchasing information. The 10 detector signals this presence by switching on indication lamp 111, which informs the user that the purchasing information is available and that a product may be bought. Alternative or in addition to signaling via the indication lamp, a characteristic sign may be shown on the display 106 or a characteristic sound may be reproduced through speakers 108.

Part of the functionality of the local terminal is carried out in software. To this 15 end, the local terminal comprises a processor 112 for the execution of program instructions stored in memory 114. The local terminal further has an interface 116 to exchange data with peripheral devices. Furthermore, there is a bus 118 to exchange data and commands between the various components of the local terminal. The memory 114 contains a number of modules for carrying out various functions of the terminal. Furthermore, the memory has storage space 20 120 for storing the purchasing information extracted from the program data and a list 122 for storing the list of purchase orders. The presenting means 124 presents on the display 106 the user information about the product announced in the purchasing information give the user the option to buy this product. If the user chooses to buy this product, a purchase order is assembled and storing means 126 stores this purchase order in the list 122. Furthermore, there 25 is reviewing means 128 for presenting to the user the purchase orders stored in the list 122 for review. Per purchase order, the user can choose to finalize the order or choose to discard the order. If the order is finalized, it is sent via modem 130 to the organization processing the order. If the order is to be discarded, it is deleted from the list 122. Furthermore, there is a remote control 132 with which the user may control the various functions of the local terminal. 30 The remote control sends its commands as infrared signals to the terminal where they are received by infrared receiver 134 and processed. It will be clear that other ways of control of the functions are possible

The operation of placing a purchase order according to the invention, whereby the local terminal is a television set, is as follows. A broadcast station broadcasts a TV

program and the program data of that program is received through receiver 102 and reproduced via display 106 and speakers 108. At a certain instant, additional purchasing information is coded in the program data and transmitted together with the program data to the local terminal. The detector 110 detects the presence of the purchasing information, signal this 5 to the user via indication lamp 111 and stores the information in storage space 120. The user then activates presentation means 124 to view the purchase information, e.g. via a simple click on the appropriate button on the remote control. If the user wants to buy the corresponding product he indicates this, e.g. by again pressing the button on the remote control. The purchase order is then stored in list 122 and the normal presentation of the TV program is resumed. At a 10 later instant, additional purchasing information is present for another product and this is again signaled to the user. The user may again view this information and possibly order that product as well. If so, this purchase order is added to the list 122 where the previous order has been stored. This process may be repeated many times, possibly interrupted by one or more breaks in the presentation of programs. After the viewing session or sessions, the user may activate 15 the television set and bring it in the so-called dash board mode. In this mode, there is no reception and presentation of TV programs but a page appears on the screen with a number of icons. Each of these icons represent a certain function of the television set, e.g. changing the settings. One of the icons is called 'session purchase' and is to access the list 122. The user clicks this icon and the purchase orders earlier stored in the list are presented. The user 20 reviews each purchase order to determine whether he wants to pursue the order and marks the orders accordingly. Then the user indicates that the review has been completed and all purchase orders that have been approved are sent via the modem for being processed.

In the prior art the user may make an impulse purchase while watching a TV program. The user decides on the purchase and finalizes it in one go. According to the 25 invention, the user may make a decision that is an intention to purchase while watching the TV program and this intention is stored without immediately being finalized. A number of these intentions may be made and stored. Then at a later instant, the user may review these decisions in a single session and decide on the intentions to purchase for all together. This concept according to the invention is called 'session purchasing' since a number of actual purchases 30 are made in a single session.

In a particular embodiment the purchasing information is a Uniform Resource Locator (URL) used to access locations via the Internet. It is signaled to the user if a URL is present in the program data relating to a product that can be purchased. The user may then press the purchase button on the remote control, expressing his interest in the product, and the

URL is stored in list 122. A number of these URLs may be stored during watching this and other TV programs. At a later instant the when the user reviews the list, the address indicated by the URL is accessed and information is retrieved. This may be additional product information and may relate to filling out details for actually placing the purchase order. An 5 advantage in this embodiment is that it is not necessary to establish a link via the Internet while watching the TV program but that this link may be established later when no actual program is being watched. This means that the handling of the purchase order, or actual the intention for the purchase order, requires very little time during the presentation of the TV program. A URL can be used for two purposes in this embodiment. First, it may be used to 10 retrieve additional information further describing the product or purchasing detail of the product. Secondly, it is used as the address where the order is to be placed. For a given product these two URLs may be point to the same address but they also may point to two different addresses for the two respective purposes. So the additional information is then obtained from one location and the purchase order details are stored at another location.

15 In the embodiments described above, the local terminal 100 was a television set receiving and presenting a television program. However, the invention can also be applied on different kinds of terminals. The local terminal may be a radio receiving a radio program. The radio may then have a display for presenting the required information or may be capable of being connected to some display. Furthermore, the local terminal may be a Personal Digital 20 Assistant (PDA) equipped with a receiver for the reception of program data and with a modem for the exchange of the required data. Furthermore, the local terminal may be a Personal Computer equipped with a receiver for the reception of program data and with a modem for the exchange of the required data.

It should be noted that the above-mentioned embodiments illustrate rather than 25 limit the invention and that those skilled in the art will be able to design many alternative embodiments without departing from the scope of the appended claims. In the claims, any reference signs placed between parentheses shall not be construed as limiting the claim. The word 'comprising' does not exclude the presence of elements or steps other than those listed in a claim. The word "a" or "an" preceding an element does not exclude the presence of a 30 plurality of such elements. The invention can be implemented by means of hardware comprising several distinct elements and by means of a suitably programmed computer. In the device claim enumerating several means, several of these means can be embodied by one and the same item of hardware.

## CLAIMS:

1. A method of enabling a user to place a purchase order from a local terminal, the method comprising the steps of:

- transmitting audio and/or video program data to be presented at the local terminal, the audio and/or video program data comprising purchasing information related to a product;

- offering the user the option to indicate an intention to buy the product;

- if the user indicates this intention, locally storing in a list the purchase order for the product;

- upon request by the user, presenting the list with the purchase order for review and offering the option to finalize the purchase order; and

- if the user finalizes the purchase order, sending away the purchase order for processing.

2. A method as claimed in Claim 1, wherein the purchasing information in the

15 audio and/or video program data comprises a Uniform Resource Locator (URL).

3. A method as claimed in Claim 2, wherein the step of offering the user the option to indicate an intention to buy the product includes a step of retrieval and presentation of additional information on the basis of the Uniform Resource Locator (URL).

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4. A local terminal for the reproduction of received audio and/or video program data and for enabling a user to place a purchase order, the local terminal comprising:

- a receiver for the reception of the audio and/or video program data occasionally including purchasing information related to a product;

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- detection means for detecting the presence of the purchasing information in the audio and/or video program data;

- presenting means for presenting the user the option to indicate an intention to buy the product;

- storing means for locally storing in a list the purchase order for the product;

- reviewing means for presenting the user the stored list for review and for presenting the user the option to finalize the purchase order; and
- sending means for sending the purchase order for processing.

5 5. A local terminal as claimed in Claim 4, wherein the detection means are arranged to signal the presence of the purchasing information in a visible and/or audible way.

6. A local terminal as claimed in Claim 4, wherein the sending means include a modem.

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7. A local terminal as claimed in Claim 4, wherein the purchasing information in the audio and/or video program data comprises a Uniform Resource Locator (URL), and wherein the presenting means are arranged to retrieve additional information on the basis of the Uniform Resource Locator (URL).

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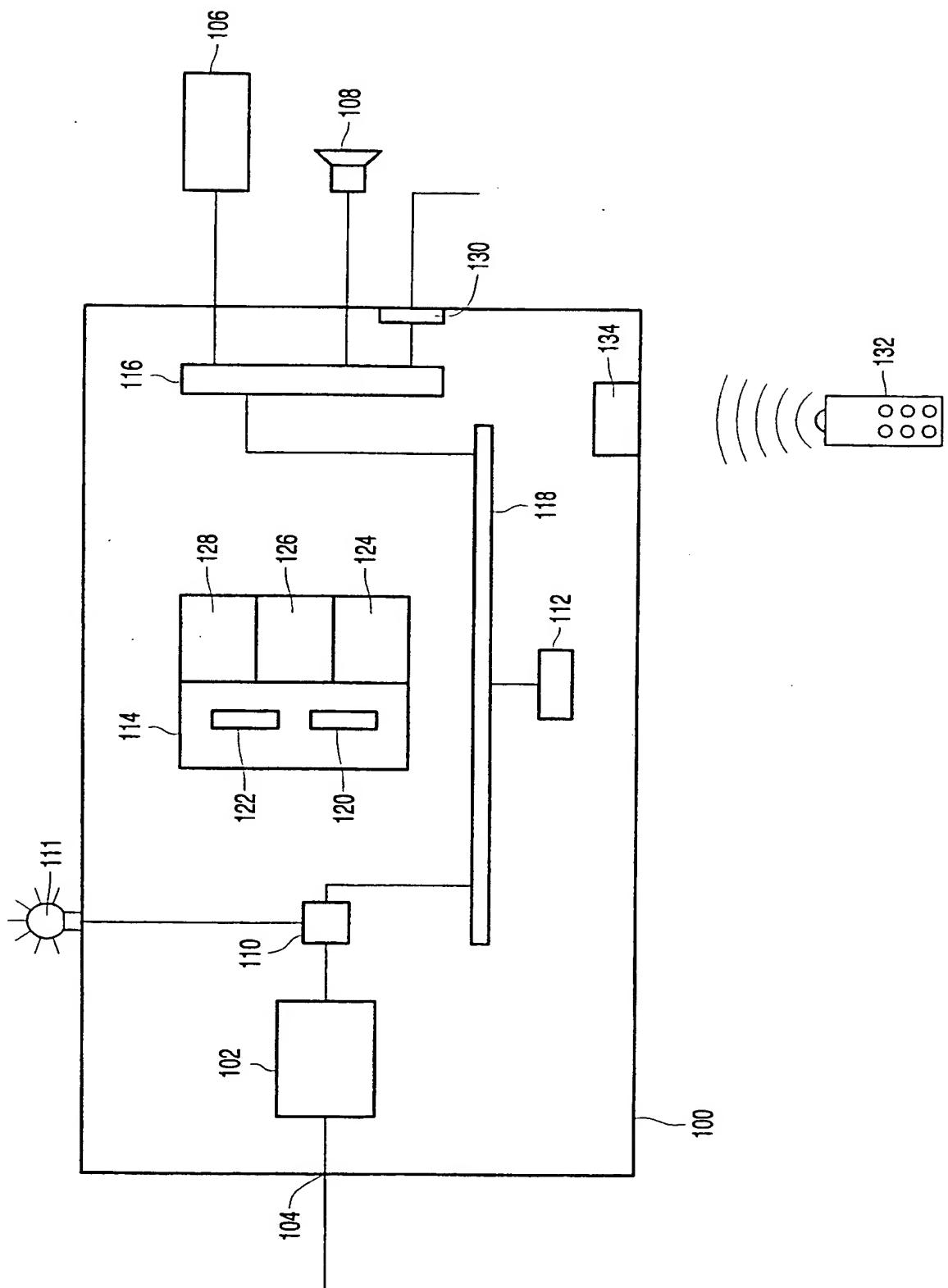
8. A television set including a local terminal as claimed in any of the Claims 4 to 7.

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9. A set top box including a local terminal as claimed in any of the Claims 4 to 7.

10. A personal digital assistant (PDA) including a local terminal as claimed in any of the Claims 4 to 7.

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# INTERNATIONAL SEARCH REPORT

Int'l Application No  
PCT/EP 00/08184

**A. CLASSIFICATION OF SUBJECT MATTER**

IPC 7 H04N7/24 H04N7/088

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)  
IPC 7 H04N G06F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

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Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

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Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2  
NL - 2280 HV Rijswijk  
Tel: (+31-70) 340-2040, Tx. 31 651 epo nl.  
Fax: (+31-70) 340-3016

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